

REMARKS

This application has been reviewed in light of the Office Action dated April 1, 2004. Claims 21-40 are now pending in the application. Claims 21, 24, 26, 30 and 39 have been amended. No new matter has been added. The Examiner's reconsideration of the rejection in view of the following remarks is respectfully requested.

By the Office Action, claims 21-40 stand rejected under the judicially created doctrine of double patenting in view of U.S. Patent No. 6,700,420.

The Examiner stated that while the claims are not identical, they are not patentably distinct from each other because one of ordinary skill in the art would recognize the synonymous nature of the claim language. The current amendments to the claims, especially claims 21, 30 and 39, are believed to overcome the double-patenting rejection.

While the Applicants respectfully disagree with the Examiner's assertion, the Applicant respectfully requests that if the rejection is maintained in view of the amendments that the rejection be held in abeyance until the other substantive issues in the case are resolved. If resolved and the double-patenting rejection remains, the Applicant offers to submit a properly executed terminal disclaimer to overcome the double-patenting rejection. In the meantime, reconsideration of this rejection is earnestly solicited in view of the amendments.

By the Office Action, claims 24, 26 and 30 were objected to by the Examiner for informalities. Appropriate corrections have been made in a way believed to overcome the objections. Early and favorable reconsideration is respectfully solicited.

By the Office Action, claims 21-24 and 27-29 stand rejected under 35 U.S.C. §103(a) as

being unpatentable over Applicant's Admitted Prior Art (FIG. 1) in view of Huber et al. (U.S. Patent No. 6,420,920) (Huber). Applicant respectfully disagrees with the rejection.

The Examiner stated that the Admitted Prior Art (FIG. 1) teaches the elements of claim 21 without a sync circuit, but that Huber provides a sync circuit that regulates slew rates between two paths.

Claim 21, as amended, now includes, *inter alia*, a bi-directional sync circuit, operably coupled between the first and second paths, which is configured to synchronize the speed of signals traveling on the two paths to arrive at the output driver by dynamically synchronizing the two paths bi-directionally through the sync circuit; the bi-directional sync circuit having a single connection to the first path and a single connection to the second path and being sized in accordance with relative connection positions in the first and second paths.

The present invention operates in a significantly different way from the circuit of Huber. Huber provides a phase splitting circuit that produces different out of phase clock signals. Huber is directed to a circuit for phase-splitting a clock signal. The clock signal is input to the circuit and the circuit derives two non-complementary outputs from the signal, namely OUT and OUT* (see e.g., FIG. 2 and Abstract of Huber). The function of Huber is to provide two signals of different phase and not to dynamically synchronize two branches as set forth by the present invention. OUT and OUT* are the same signal but out of phase. While it can be argued that these signals have portions, which are synchronized, the delays associated with each branch make it impossible for the part of the signal to arrive at a same time.

Claim 21 dynamically synchronizes two paths bi-directionally through a sync circuit. This is not disclosed or suggested by Huber. In fact, all embodiments of Huber include a description and FIGS. which show an inverter 60 in a path between the OUT and OUT* paths. This suggests that the

present invention is not disclosed or suggested by Huber since inverters are uni-directional devices and cannot be bi-directional by themselves.

Additionally, the present claims now recite that the sync circuit is sized in accordance with its connected position along the first and second paths. Support for this, can be found throughout the specification, e.g., in the specification at page 10, lines 6-17 elements describing FIG. 3A. The magnitude of the components of the circuit is determined based upon there location in the first and second paths. This is not disclosed or suggested by Huber or the Admitted Prior Art .

Thus, the Admitted prior art and Huber fail to disclose or suggest at least: a bi-directional sync circuit, operably coupled between the first and second paths, which is configured to synchronize the speed of signals traveling on the two paths to arrive at the output driver by dynamically synchronizing the two paths bi-directionally through the sync circuit; the bi-directional sync circuit having a single connection to the first path and a single connection to the second path and being sized in accordance with relative connection positions in the first and second paths.

As mentioned the circuit of Huber is not bi-directional and the Admitted Prior Art does not even include a sync circuit. In addition, the cited combination fails to disclose or suggest that the bi-directional sync circuit is sized in accordance with relative connection positions in the first and second paths.

Claims 21-29 are therefore believed to be in condition for allowance for at least the reasons stated. Early and favorable reconsideration is earnestly solicited.

By the Office Action, claims 21, 24, 26 and 30-40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Applicant's Admitted Prior Art (FIG. 1) in view of Parker et al. (U.S. Patent No. 5,375,148) (Parker). Applicant respectfully disagrees with the rejection.

Regarding claim 21, the Admitted prior art and Parker fail to disclose or suggest at least: a bi-directional sync circuit, operably coupled between the first and second paths, which is configured to synchronize the speed of signals traveling on the two paths to arrive at the output driver by dynamically synchronizing the two paths bi-directionally through the sync circuit; the bi-directional sync circuit having a single connection to the first path and a single connection to the second path and being sized in accordance with relative connection positions in the first and second paths.

Firstly, if the inverters 50 and 54 of Parker are considered a sync circuit, they include

1) more than one connection point (each inverter includes one connection point but is not bi-direction), and

2) both inverters are of the same size despite their different relative locations along first and second paths. Claim 21 recites that the bi-directional sync circuit has a single connection to the first path and a single connection to the second path and is sized in accordance with relative connection positions in the first and second paths. Parker is silent as to any relationship between position and the size of inverters 50 and 54. In order for the circuit of Parker (which is a logic circuit) to be balanced the inverters should have equal size. It is therefore believed that the cited combination fails to disclose all of the elements of the present claims as amended.

Claim 30 includes, *inter alia*, bi-directional sync circuits each having a single connection to the first path and a single connection to the second path, the sync circuits being sized relative to their position along each of the first and second paths and the connections being disposed between respective driving elements. In addition to the elements not disclosed or suggested as provided above, claim 30 sets forth multiple bi-directional sync circuits where the sync circuits are sized relative to their position along each of the first and second paths.

Regarding claim 39, claim 39, now recites, *inter alia*, that the bi-directional sync circuit

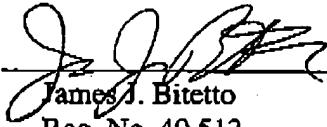
having a single connection to the first path and a single connection to the second path and being sized in accordance with relative connection positions in the first and second paths. This is similar to claim 30.

Advantageously, a single sync circuit of the present invention connects to each of the associated paths at only one point, is bi-directional and is sized in accordance with its position along the path to provide for the arrival of signals at substantially the same time at the end of the paths. The circuit of Parker, Huber and/or the Admitted Prior Art does not disclose or suggest a sync circuit or circuits, which are bi-directional and include only a single connection to the first and second paths. Notwithstanding this, the cited combination fails to disclose or suggest that the bi-directional sync circuit is sized in accordance with relative connection positions in the first and second paths. Therefore, the present claims are believed to be in condition for allowance for at least the stated reasons. Reconsideration of the rejection is earnestly solicited.

In view of the foregoing amendments and remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant's Deposit Account No. 50-1433.

Respectfully submitted,

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Date: 7/1/04

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